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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,683	09/27/2001	Daoben Li	10748-006-999	5473

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EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,683

Applicant(s)

LI, DAOBEN

Examiner

Jean B. Corrielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-12, 14-27, 29-34, 36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-12, 14-24, 30, 31, 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 25-27, 29 and 32-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 8/6/04. These drawings are acceptable.

Claim Objections

2. The objection to claims 24-27, 29-34 and 36-37 has been withdrawn.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 10-12 and 14-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Let's consider claim 10, the claim, when taken as a whole, only generates a sequence of pulses. A sequence of pulses, however, is nothing but just a **signal** per se, i.e. a signal that is not tied to any physical structure for transmitting or receiving the signal.

The Interim Guidelines for examination of Patent Applications for Patent subject matter Eligibility” provides that for claims including such excluded matter to be eligible, the claim must be for a practical application of the section 101 judicial exception. The claim fails to provide a practical application of the abstract idea because the claimed invention does not transform an article or physical object to a different state or thing nor the claimed invention otherwise produces a useful concrete and tangible result. Note that

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the claim fails to provide a practical application that produces a practical result because the final result achieved by the claimed invention is not useful tangible and concrete.

Hence it is concluded that the claim is non-statutory.

Claims 11-12 and 14-23 are likewise rejected.

Claim Rejections - 35 USC 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Miseki Kimio et al JP 403177900A.

Miseki Kimio et al discloses a method and apparatus comprising see fig. 4: generating a plurality of pulse-trains each comprising a plurality of pulses separated by intervals see (Abstract and fig. 4), each one of the plurality of intervals is unequal in duration see (Abstract and fig. 4), assigning a polarity to each of the pulses thus forming at least one code word from each of the pulse trains see (fig. 4 and abstract).

As per claim 14, each codeword is inherently unique within the plurality of code words.

Claim Rejections - 35 USC 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16, 18, 19, 21, 24, 31, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miseki Kimio et al.

As per claims 21 and 37, as applied to the above claims, Miseki Kimio et al teaches every feature of the claimed invention but does not explicitly teach the code is a barker code. However, the used of a Barker code is old and well established in the art. It would have been obvious to one skill in the art to use such a code so as to take advantage of its good correlation properties.

As per claim 16, it would have been obvious to one skill in the art to configure Miseki Kimio in such a way that cross-correlation function between any two of the code words has side lobes equal to zero in order to prevent distortion to succeeding codewords.

As per claims 18-19, it would have been obvious to one skill in the art to increase the duty ratio of each code by representing each a positive code associated with a +1 pulse and a negative code associated with a -1 pulse so as to satisfy system coding requirements.

As per claims 24 and 31, it would have been obvious to one skill in the art to implement the invention in the spread spectrum multiple access environment so as to enhance system integrity.

As per claim 36, it would have been obvious to one skill in the art to associate a positive compression code with a +1 pulse and a negative compression code with a –

1 pulse. The reason to do so would have been the same as provided above in reference to claim 18-19.

Allowable Subject Matter

9. Claims 25-27, 29 and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 8/6/04 have been fully considered but they are not persuasive. Applicant argues that the claims include a practical limitation because the claims recite "forming at least one code word". However it is noted that a "code word" is merely a signal per se and does not constitute a practical application. It is further alleged that **the signals** formed by the methods of claims 10-12 and 14-23 are not laws of nature natural phenomena or abstract and therefore have functional utility. However, it is noted that "signals", in general, are abstract ideas. It is further alleged that the code signals have practical application as large-area code division multiple access codes and as such, are patentable. However large-area code division multiple access codes are not seen to define a practical application rather large-area code division multiple access codes define code "signals" and signals, per se, are non-patentable. It is alleged that the rejection merely refers to abstract and fig. 4 without identifying or explaining how the limitations are found in the reference. However it is noted that fig. 4 is self explanatory. More specifically fig. 4 shows a series of codes formed by generating a series of pulse

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trains see for instance subframe 2 in which the pulse intervals are unequal and a polarity is assigned to each one of such pulse i.e. up (+) or down (-). It is further alleged that there is no knowledge that such a code could be used in increasing a duty ratio of represented code words. However it is noted that such limitation is not clearly recited in the claims. In response to applicant request of documentary evidence, please find for instance reference No. 6,091,703 to Saunders et al, col. 7, lines 51-57.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jean B Corrieus
Primary Examiner
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8-3-06